

device **305** receives the transmitted navigational command and forwards the command to the processor **315** in STB. The processor receives and executes the transmitted navigational command navigates the image accordingly.

[0034] In one embodiment, as shown in **FIGS. 4A, 4B** and **4C**, the image has a plurality of selectable image portions. At least one of the selectable image portions is currently highlighted for possible selection by the user of the auxiliary display device **200**. The user can activate a function associated with the currently highlighted selectable image portion by selecting the at least one entry control area **290** (see **FIG. 2**). The particular navigational command associated with the selected control area is executed to change the selected portion from a currently selected portion displayed at a first location on the display screen **320** to a different selected portion displayed at a second location on the display screen **320** according to the executed command.

[0035] In one preferred embodiment, a selected navigational command is translated into a wireless signal and is transmitted via transmitter **245** to the display control device **305** for controlling which portion of the image viewed on the image display screen **320** is selected

[0036] When a user selects one of the defined control areas **210, 220, 230, 240, 250, 260, 270, 280** on the touchscreen **205** of the auxiliary display device **200** by a stylus- or finger-initiated touch in that area, one or more navigational command signals are transmitted to the set-top box display control device. The signals can take the form of infrared (IR) or wireless radio frequency (RF) signals. Alternatively, navigational command signals can be transmitted over a wired interface using typical wired protocols, such as Ethernet, USB, 1394, or the like.

[0037] The image viewed on display screen **320** can include a television program grid of an electronic program guide (EPG) including a plurality of adjacent program windows A-X, which correspond to a particular channel and/or time slot during which programming is to commence. The selection of the one navigating control area on touchscreen **205** causes a particular program window adjacent to a previously selected window to be selected in accordance with the executed command.

[0038] **FIG. 4A** shows an example of navigating a program grid viewed on image display screen **320** using the present invention, where program window P is currently highlighted for possible future selection. If navigational control area **230** (Left) is selected, program window O is highlighted instead of program window P, as shown in **FIG. 4B**. Then, as shown in **FIG. 4C**, if navigational control area **250** (Up & Left) is selected, program window H is highlighted instead of program window O. If entry control area **290** is selected while window H is highlighted, a function associated with window H, such as a hyperlink or a second window, is activated when processor **315** in the display control device **305** receives and executes a corresponding entry command from auxiliary display device **200**.

[0039] A currently displayed program grid may show only a portion of the total program grid, such as only a three-hour time window or only a portion of the available channels. If so, then additional portions of the program grid may be revealed if a user reaches an edge of the currently displayed program grid and selects a navigational control area that

would go past the edge. Such a selection is ignored if the currently displayed program grid shows the total program grid.

[0040] When the user wants to implement a combination move by selecting one of navigational control areas **250, 260, 270, 280**, the application **225** running on processor **215** in the auxiliary display device **200** causes two sequential commands to be transmitted from the auxiliary display device **200** to the display control device **305**, just as if a user individually selected two of navigational control areas **210, 220, 230, 240** in sequence. Alternatively, a single "combination" command can be transmitted.

[0041] The image viewed on the display screen **320** can also be navigated to play a game (e.g., Pac-Man™, Space Invaders™, or the like) by moving game pieces or other images in the same fashion as described above.

[0042] In other preferred embodiments of the present invention, the navigational control areas may be used to cause an action or function to occur with respect to whatever application is currently executing on the STB **305** and being shown on the display screen **320**. Each application may have a different set of actions or functions that occur with respect to particular navigation commands. In some applications, such as the EPG application described above, selection of a navigation control area causes a navigation function to occur (e.g., selection of the left navigation control area **230** causes a movement to the left, selection of the down navigation control area **220** causes a downward movement). However, in another application, selection of a navigation control area may not necessarily cause a navigation function to occur. For example, the navigation control areas may cause different actions or functions to occur, such as mode changes or item selections. A mode change or item selection may not necessarily cause the movement of anything on a display screen. The scope of the present invention includes such alternative embodiments.

[0043] **FIG. 5** shows a flow chart including steps for navigating an image shown on display screen **320** using an auxiliary display device **200**. An application **225** is run on a processor **215** within the auxiliary display device **200** which partitions the touchscreen **205** into a plurality of navigational control areas **210, 220, 230, 240, 250, 260, 270** and **280** and at least one entry control area **290** (step **505**). Each navigational control area **210, 220, 230, 240, 250, 260, 270, 280** is associated with a particular navigational command that changes the selection of a portion of an image viewed on the display screen **320**. One of the navigational control areas is selected (step **510**). The particular navigational command associated with the selected control area is transmitted from the auxiliary display device **200** to the processor **315** in STB **310** (step **515**). In step **520**, the processor **310** in display control device **305** navigates an image viewed on display screen **320** based on the transmitted navigational command. Each time another one of the navigational control areas is selected (step **525**), steps **510, 515** and **520** are repeated.

[0044] The present invention may be implemented with any combination of hardware and software. If implemented as a computer-implemented apparatus, the present invention is implemented using means for performing all of the steps and functions described above.

[0045] The present invention can be included in an article of manufacture (e.g., one or more computer program prod-